4.8 TRAFFIC AND TRANSPORTATION

This section discusses potential impacts on local transportation networks, including roadways, railways and airstrips. Only the construction phase of the Project would affect traffic. Final requirements for traffic-related effects would be developed during the encroachment permit process.

4.8.1 Environmental Setting

Freeways, Highways and County Roadways

Four interstate highways and two major state roads are located in the Project area. In Kern County, Interstate 5 (I-5) crosses the pipeline at MP 3.50. I-5 is the major north-south highway in California. In San Bernardino County, I-15 runs through Barstow, connecting the greater Los Angeles area to Las Vegas, and crosses the pipeline at MP 122.75. Interstate 40 (I-40), a major east-west highway connecting Arizona to the Pacific coast, crosses the pipeline in San Bernardino County at MP 160.00 and runs parallel from MP125 to MP169. Interstate 10 (I-10) runs east-west and connects the greater Los Angeles and San Diego areas with the greater Phoenix area, and crosses the pipeline in Riverside County at MP 301. In addition to these interstate highways, the pipeline crosses State Route 99 (SR 99), a north-south highway connecting the greater Los Angeles area to the Bakersfield and Fresno metropolitan areas, at MP 5.25 in Kern County, and State Route 66 (SR 66) in San Bernardino at the Cadiz lateral.

In addition to these highway crossings, several roadways run parallel to the pipeline for extended distances. State Route 166 (SR 166) parallels the pipeline for nearly 3.5 miles at the beginning of the pipeline in Kern County. Sebastian Road parallels the pipeline from MP 14 through MP 16. Banducci Road parallels the pipeline from MP 26 through MP 31. Oak Creek Road parallels the pipeline from MP 47 through MP 52. The final extended parallel in Kern County is along State Route 58 (SR 58), where the pipeline is paralleled from MP 59 through MP 110. Also in San Bernardino County, Cadiz Road parallels the pipeline from MP 215.50 through MP 257. Finally, in Riverside County, the pipeline runs parallel to Midland Road from MP 265.50 through MP 292.

Circulation conditions are often described in terms of level of service (LOS). LOS is a means of describing the amount of traffic on a roadway compared to the design capacity of roadways. Roadway design capacity is defined as the maximum rate of

vehicle travel that can reasonably be expected along a section of roadway. LOS rating uses qualitative measures that characterize operational conditions within a traffic stream and their perception by motorists. These measures include freedom of movement, speed, travel time, traffic interruptions, types of vehicles, roadside clearances, absence of trucks or heavy vehicles, and level of terrain. LOSs range from "A" (representing free flow conditions) to "F" (representing extreme traffic conditions). No roads in the study area are operating at a LOS of "C" or lower. Table 4.8-1 provides a description of the LOSs.

Table 4.8-1. Levels of Service Descriptions

LOS	Description
LOS A	Average speeds approach 60 mile per hour (mph). Passing is comfortably accomplished. No platoons of more than three vehicles.
LOS B	Speeds of 55 mph or higher are expected on level terrain, passing demand approximately equals passing capacity.
LOS C	Noticeable increase in platoon formation, significant reductions in the passing capacity begin to occur and, drivers are delayed up to 60% of the time.
LOS D	Passing is extremely difficult, 5 to 10 vehicles are moving in platoons.
LOS E	Passing is virtually impossible and platooning becomes intense with slower vehicles or other interruptions, such as vehicles existing or entering. Average travel speed on sustained upgrades maybe as low as 25 mph.
LOS F	Average speeds drop below 50 mph sometimes 35 mph or less. The traffic stream consists of long platoons of vehicles and no ability to pass. Traffic conditions are very volatile.

Railways

The pipeline crosses railroad tracks at three locations in Kern County. The Southern Pacific track is crossed at MP 56, and the Atchison, Topeka and Santa Fe Railroad is crossed at MP 56.25 and MP 83. In San Bernardino County, the Atchison, Topeka and Santa Fe tracks run parallel to the pipeline and cross it five times between MP 118 and

MP167. In Riverside County the Atchison, Topeka and Santa Fe tracks cross the pipeline at MP 275.50. The Cadiz Lateral would involve two crossings of the Atcheson, Topeka, and Santa Fe Railroad near Cadiz. Only construction of the Cadiz Lateral would cross a railroad track.

Airstrips

There are seven public airports and one military airport along the route of the pipeline. The Bakersfield Municipal Airport and the Meadows Field Airport are located near the City of Bakersfield, which is approximately 20 miles north of the furthest western extent of the pipeline. The Tehachapi Municipal Airport and the Mountain Valley Airport are located along the pipeline in the town of Tehachapi. The Mojave Airport is located in the town of Mojave. The Daggett Airport is located in the City of Barstow, and the Blythe Airport is located in the City of Blythe. Edwards Air Force Base is also located along the pipeline route but is not accessible by civilian aircraft.

Access Roads

Primary access to construction areas would be via public roads and existing access roads (Table 2-3). No new access roads would need to be built or upgraded for the Project.

Project-Related Road Crossings

Short segments of Line 1903 would need to be replaced at seven road crossings in order to meet USDOT standards. Two types of replacements would be considered by EPNG at each site. Either the existing pipe segment would be removed and replaced, or the existing pipe would be capped and left in place and an adjacent trench or bore would be installed. After the replacement is complete, all roadway surfaces would be returned to pre-construction conditions. These seven road crossings are listed below:

- Hector Road at MP 154.90 (San Bernardino County road);
- Baghdad Chase Road at MP 173.80;
- Midland Road at MP 265.58;

- 6th Avenue at MP 296.23;
- 8th Avenue at MP 298.81; and
- 10th Avenue at MP 300; and
- SR 66 (National Trails Highway) at MP 6 of the Cadiz Lateral.

Hector Road and Baghdad Chase Road are both county-maintained roads in San Bernardino County. The pipeline would cross these roads in the Mojave Desert, east of Barstow and Daggett. These are both rural roads with low volumes of traffic and with a LOS of A (Onumonu, 2004). Midland Road and 6th, 8th, and 10th Avenue are all county-maintained roads in Riverside County. The pipeline crosses Midland Road in the Rice Valley near the San Bernardino and Riverside County line. Midland Road is a rural road with a low volume of traffic and LOS of A (Healy, 2004). The pipeline crosses 6th, 8th, and 10th Avenues outside of the city limits of Blythe. All three avenues are considered to be rural with low volumes of traffic and operating at a LOS of A (Healy, 2004).

The Cadiz Lateral would cross SR 66 in the Cadiz Valley. In the Mojave Desert SR 66 becomes a National Trails Highway. The average daily traffic count for this segment of road in 2001 was 477 vehicles (Ruvalcaba 2004). This two lane road is considered to be operating at a LOS of A. At this road crossing, EPNG is proposing to bore under the road, and traffic would therefore not be disrupted.

4.8.2 Regulatory Setting

Federal

Federal regulatory involvement is associated with the safe storage and transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the USDOT to establish criteria and regulations regarding safe storage and transportation of hazardous materials. The USDOT would primarily deal with the transportation of hazardous materials on roadways in the Project area. The Hazardous Materials Regulations (49 CFR, Subtitle B, Chapter L, Subchapter C) addresses transportation of hazardous materials, types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. Additionally, the Motor Carrier Safety

Regulations (49 CFR Subtitle B, Chapter III, Subchapter B) specifies safety considerations for the transport of hazardous materials over public roadways.

State

Any work in the ROW of a State highway would require an encroachment permit from the California Department of Transportation (Caltrans).

A comment letter was received from Caltrans Districts 6 and 8, requesting enroachment permits for any work within a Caltrans ROW. The only road crossings for the Project are on county roads; therefore, Caltrans encroachment permits would not be required.

Local

Any encroachment into, on, or over the road system of Kern County, San Bernardino County, or Riverside County would require a county encroachment permit.

A comment letter was also received from the County of Riverside Transportation and Land Management Agency, requesting encroachment permits for work within a County ROW. EPNG would apply for encroachment permits in both Riverside and San Bernardino Counties where work within County ROWs is planned.

4.8.3 Significance Criteria

An adverse transportation impact was considered significant and would require mitigation if Project construction or operation would:

- result in a short- or long-term decrease in the level of service of a roadway;
- cause the closure of an arterial or collector roadway for more than 48 hours consecutively;
- significantly disrupt access to or from adjacent land uses for more than 14 days;
- prevent movement of emergency vehicles;

- conflict with planned transportation projects or adopted public transportation policies;

- create noticeable deterioration of local roadway surfaces; or

- create a safety hazard for vehicles, pedestrians, or rail operations.

4.8.4 Impact Analysis and Mitigation

Most of the new construction would be in remote rural areas where existing traffic volumes are very low. During the construction phase of the Project, access to the work sites would start along the State and interstate highways in the Project area. Access to the specific construction sites would continue from the highways and onto existing county roads and along the ROW. The distances traveled on the county roads would, in most cases, be less than one mile.

The movement of construction equipment and materials from contractor and pipe storage yards to construction work area would result in an additional short-term impact on the transportation network. Several construction-related trips would be made each day (to and from the job site) on each spread. This level of traffic would remain consistent throughout the construction period and typically would occur during the early morning hours and evening hours.

Table 4.8-2 lists the equipment and vehicles that would be required for each of the identified construction activities. Except for commuting workers, this equipment would be brought to the construction site and staged at a nearby staging location. From the staging locations, travel to and from the work site would be limited to ROW roads and, in some cases, short distances along local roads.

Construction workers commuting to the project area could cause localized traffic congestion and roadside parking hazards. Pipeline construction work is typically scheduled to take advantage of daylight hours, usually starting at 7:00 a.m. and completing at 6:00 p.m., six days a week. Therefore, most workers would commute to and from the construction right-of-way during off-peak hours. Furthermore, because construction would move sequentially along the pipeline route, traffic flow impacts that did arise would be temporary on any given section of roadway. Traffic impacts along

the pipeline route due to construction workers and construction equipment are less than significant (Class III impact).

A comment letter dated November 25, 2002 was received from the Kern County Waste Management Department (WMD). The letter expressed concerned about the impacts from the Project on Boron Avenue, which provides the only access to the Boron Sanitary Landfill in Boron, California. No construction activities are planned on this segment of the pipeline (between MP 85 and MP 86). Therefore, no impacts on traffic are expected on Boron Avenue or related to access to and from the Boron Sanitary Landfill.

Table 4.8-2. Equipment List for Construction Activities

Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Equipment															
Trucks/Trailers	4	3	2	4	3	3	2	2	2	4	N/A	3	4	2	N/A
Track Backhoe	4	1			1	1					N/A	1			N/A
Sidebooms		2	2	6	2	2	2	2	2	6	N/A	2	6		N/A
Track Dozer	2	1	1	3	1	1	1	1	1	3	N/A	1	3	2	N/A
Welding Rigs	4	2	2	10	2	2	2	2	2	10	N/A	2	10		N/A
Hot Dope Pot	2		1	2			1	1	1	2	N/A		2		N/A
Backhoe	2		1				1	1	1		N/A			2	N/A
X-ray Trucks	2		1	2			1	1	1	2	N/A		2		N/A
Pick-up Trucks	12	4	6	14	4	4	6	6	6	14	N/A	4	14	7	N/A
Bending Machines				1						1	N/A		1		N/A
Fuel Trucks				1						1	N/A		1		N/A
Hydrostatic Fill & Pressure Pumps				2						2	N/A		2		N/A
Skid Trucks				1					1	1	N/A		1		N/A
Two-Ton Flatbed Trucks				2					2	2	N/A		2		N/A
Padding Machines				1					1	1	N/A		1		N/A
Water Trucks				2					2	2	N/A		2		N/A
Cranes							2	2			N/A				N/A
Front End Loader				2					2	2	N/A		2		N/A
Dump Truck				1					1	1	N/A		1		N/A
TOTAL	32	13	16	54	13	13	18	18	25	54		13	54	13	
Personnel															
Heavy Equipment Operators	6	2	3	*	2	2	3	3	3	*	N/A	2	3	3	N/A
Welders	4	2	2	*	2	2	2	2	2	*	N/A	2	2		N/A
Welder Helpers	4	2	2	*	2	2	2	2	2	*	N/A	2	2		N/A
Laborers	8	4	4	*	4	4	4	4	4	*	N/A	4	4	8	N/A
Truck Drivers	4	3	2	*	3	3	4	4	2	*	N/A	3	4	2	N/A
X-ray Technicians	4		2	*			2	2	2	*	N/A		2		N/A
Crane Operators				*			2	2		*	N/A		2		N/A

Table 4.8-2. (Continued)

Code	Activity
1	Hydrostatic Test Cut-In
2	Install New Valve with Blow-off and Bypass
3	Pipeline Tie-in
4	Replace Pump/Heat Station Appurtenances with Pipe
5	Remove and Cap Vent Valve
6	Remove Valve or Interconnect and Replace with Pipe
7	Install New Pig Facilities
8	Remove Pig Facilities; Cut and Cap Pipe; Install Vent Valve
9	Install New Metering Facilities
10	Pipe Replacement/Reconditioning
11	Storage/Staging Area at Existing Pump Station
12	Remove and Cap Pig Signal
13	Pipeline Sleeve Removal/Pipe Repair
14	Hydrostatic Test Water Apurtenances
15	Extra Work Space/Storage/Staging

Two railroad crossings would be bored in the construction of the Cadiz Lateral. Therefore, no impacts on railroad operations or facilities would result from pipeline construction.

Impact TR-1: Disruption of Traffic Flow at Road Crossings Needing Replacement

Traffic flow would be disrupted at seven road crossings where trenching of roadways is proposed. (Potentially Significant, Class II)

Seven road crossings would need to be replaced in order to meet USDOT standards. Two types of replacement would be considered at each site by EPNG. Either the existing pipe segment would be removed and replaced, or the existing pipe would be capped and left in place and an adjacent trench or bore would be installed. Trenching across the roads would require either temporary lane closure or temporary closure of the road, which would disrupt the flow of traffic along these roads.

Mitigation for Impact TR-1:

MM TR-1. ***Traffic Control Plans.*** *Sixty days prior to construction, the Applicant would submit a traffic control plan for each of the road crossings where trenching of roadways is proposed. Traffic Control Plans would be required for construction activities that would directly or indirectly disturb the local traffic flow at each geographic location. These plans would be submitted to the CSLC and each jurisdiction for review and approval where the disruption may occur. The plans would be required to follow the standards and techniques prescribed in the Caltrans' Traffic Manual, Section 5, "Manual of Traffic Controls for Construction and Maintenance Work Zones"; the "Standard Specification for Public Works Construction," and the Manual on Uniform Traffic Control Devices (MUTCD), Part VI, "Traffic Controls for Street and Highway Construction, Maintenance, Utility and Emergency Operations." These plans would contain elements on detour routing, flagging, emergency contact numbers, methods of advance notification for residences and businesses, and emergency operations agencies in proximity to each work site.*

Rationale for Mitigation

The preparation and implementation of a Traffic Control Plan is necessary to help alleviate traffic congestion and maintain access along the six roads that would be trenched. Planned traffic flow at these locations would prevent significant impacts to traffic at these locations.

Table 4.8-3 presents a summary of impacts on traffic and transportation and recommended mitigation measures.

Table 4.8-3. Summary of Impacts and Mitigation Measures for Traffic and Transportation

Impact	Mitigation Measure
TR-1: Disruption of Traffic Flow at Road Crossings Needing Replacement	**TR-1.** Traffic Control Plans

4.8.5 Cumulative Impacts

In addition to the proposed Project, other projects may contribute to cumulative impacts on traffic and transportation in the vicinity of the proposed Project. Some of the projects potentially contributing to cumulative impacts are discussed in Section 5.5, Summary of Cumulative Impacts.

The proposed Project would not eliminate or create new roads, nor would it permanently add to traffic and congestion in the region. All potential impacts on traffic and transportation would result from temporary construction activities. When projects are constructed at the same time, or are timed closely together, they can result in a cumulative impact on traffic and transportation locally and in a region. As discussed in Section 5.5, Summary of Cumulative Impacts, several projects—primarily industrial and housing development projects—are planned in the vicinity of the Project. Additionally, road maintenance activities for other projects and for local and State roads could occur in the vicinity of the proposed Project. The timing of construction for these projects is unknown, and it is possible that portions of these projects could be constructed at the same time and in the same vicinity as the proposed Project. Any cumulative impacts on

traffic and transportation would be limited to temporary disruptions, such as slower traffic or detours, and would be less than significant.

Except for the Cadiz interconnect, the construction activities associated with the proposed Project are limited and spread out over long distances. One project at the Cadiz interconnect, the Cadiz Groundwater Storage and Dry-Year Supply Program, has been approved. Although unlikely, it is possible that this Project could be built at the same time as the Cadiz interconnect. Potential cumulative impacts on traffic and transportation would be less than significant.

4.8.6 Alternatives

No Project Alternative

The No Project Alternative would not convert the former All American crude oil pipeline system to a natural gas transmission system. No short-term traffic impacts would occur at the seven road crossings where pipeline segments would need to be replaced for the proposed Project.

Ehrenberg to Daggett Alternative

The Ehrenberg to Daggett Alternative would not convert the portion of Line 1903 from MP 0 to MP 132.1. This alternative would not affect traffic on local access roads between MP 0 and MP 132.1. The alternative would cross the same seven roads as the Project and would result in the same potentially significant impact described for the proposed Project.

Ehrenberg to Cadiz Alternative

The Ehrenberg to Cadiz Alternative would not convert the portion of Line 1903 from MP 0 to MP 215.75. This alternative would not affect traffic on local access roads between MP 0 and MP 215.75 than the proposed Project. The alternative would not cross Hector Road (MP 154.90) and Baghdad Chase Road (MP 173.80). However, the alternative would have the same potentially significant impact described for the proposed Project for the five other road crossings.

4.8.7 References

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